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Remarks on Transplanting Fruit Trees in the Spring and Autumn.

BY S. G. PERKINS, ESQ., BOSTON MASS.

First prepare the ground where they are to be put, so that water will not remain on or near the roots. Examine the roots of the trees before planting, and *cut out* all rotten or defective roots, and *cut in* (shorten) all that are bruised or otherwise injured, to sound wood above the wound. Be careful not to plant too deep, as this may be fatal to your tree.

If the tree does not put out shoots in the spring, at the usual time, or as soon as others do that were planted at the same time, give it one good watering at the roots, and no more while it remains in a dormant state; but if the bark remains fresh, or does not turn black, wash the head and body with a watering pot or syringe every evening at sundown, until it begins to shoot or grow, when you may cease watering the head, and water the roots if required. I have had trees to remain until the last of July without putting out a leaf or shoot of any kind, and after that become as fine specimens as any in my garden.

No manure should be put to fruit trees, except it be a little vegetable manure, quite rotten, and that mixed with the earth that is to cover the roots. The question is frequently asked whether it be best to plant fruit trees in the spring or autumn. This, in this latitude, must depend on the soil into which they are to be put. If the soil be a wet, clayey one, it is best to plant in the spring; but if it be a light, gravelly soil, the autumn is preferable, because you gain four or five weeks in the growth of your plant in the spring.

If water be allowed to remain about the roots of trees that are recently planted, and are not growing, it will probably rot them by becoming stagnant and putrid. Trees should be planted therefore, so that the water will run over and off the roots, which is all they require to afford them nourishment.

Watering the head and body of a tree that is tardy in putting forth its shoots, is the safest, and indeed the only sure mode of bringing them out, while a continued watering of the roots is almost sure destruction to them.

Trees planted on a south wall or fence, that do not put out shoots in due season, should be covered for several hours when the sun is out, if the weather be warm. The leaves may be considered a sort of suction pump, which draws up the moisture from its roots and produces its increas-

ed growth, whereas a tree without leaves, and that is not already attached to the ground, has no means of carrying off the moisture from the roots. For example, if two branches of equal size and weight, the one with leaves and the other without them, are placed in vessels containing an equal quantity of water, and exposed to the sun, the one having leaves will take up the greater part of the liquid, while the other will consume comparatively little.

Some ten years ago, I imported from Paris 210 pear trees on quince stocks, whose roots, on their arrival, I found to be entirely black and dead. I shaved off with a drawing knife all the roots down to the stump. These I planted in trenches, tying them to cross-bars to keep them firm, and then filled up the trench with good soil. The heads and bodies of these trees were regularly washed in dry weather until they began to sprout, which most of them did in abundance during the summer, and I finally saved out of the whole number, 174, which became as well rooted and as good trees as any in my garden.

This has happened more than once. Three or four years ago, I imported among other trees, twenty plum trees, from six to seven feet high, and the heads of which had been budded the previous year in France. These buds had grown from nine to twelve inches long, and were perfectly fresh when they arrived; but the roots on examination were found entirely dead. Two of these I gave away. One was good for nothing, and the other seventeen I planted in my garden, having cut out all the roots that had fibres, they being entirely dead. One of my men said I might as well plant my walking-stick. Sixteen of these are now flourishing trees, well grown and well rooted, new roots being induced by means of washing the upper part of the tree.

S. G. PERKINS.

REMARKS.—The foregoing will please such of our readers as like plain, sensible advice, from a thoroughly practical man. We have ourselves seen with great surprise and satisfaction the trees referred to as having been so successfully transplanted by Mr. Perkins, under what were the most unfavorable circumstances. The great advantage of the mode he practices, of *watering the bark*, and not watering the roots of a tree, in a half dormant state, our correspondent thoroughly convinced us of in his own garden. Our readers are solicited to put in practice the invaluable advice he gives them. There is no doubt, that half the trees that die annually from the ig-

norance of transplanters, perish from a mistaken notion of deluging their roots with water daily, when their fibres are so feeble as to dread it as much as a patient afflicted with the hydrophobia.

—Editor *Downing's Horticulturist*.

From the Maine Farmer.

Setting out Trees.

The season for transplanting trees during autumn will commence ere long, and a few hints upon the subject, at this time, may not be premature. Our friend "D. T.," in the last number of the Farmer, has given you some very judicious suggestions on the subject.

We like the season of autumn rather the best for transplanting fruit trees and most of the ornamental trees, for the following reasons, viz: We generally have more time to perform the operation, and of course can set out more and do it better than if hurried with a pressure of business, as most of us are in this State when our spring seasons are short, and the transition from winter to summer, rapid.

The trees themselves, if properly placed, get "settled," as we Yankees say, and are already to take as early a start in the spring as any others. As soon as the frost comes, and the growth of the season becomes checked, you may commence operations—and it is a very good plan to divest the tree of its leaves by picking them off, if any remain. They will not then act as *pumps* to start any circulation of the sap which the roots will not be able to supply, any length of time, without being firmly placed in the soil, so as to obtain, by its spongioles, suitable material for a supply.

About three years since a communication was published in Hovey's Magazine, by Capt. Josiah Lovell, of Beverly, on the subject and mode of transplanting trees in autumn, which we have found to be a very good mode. Capt. L. is a retired sea captain, and we have found that sailors oftentimes make very excellent, exact, and methodical farmers, when they

"Leave ploughing the deep
And go ploughing the land."

We extract from his paper the following directions: "I have found it best in my soil, which is mostly a clay loam upon a subsoil of stiff clay, to transplant strawberries in August, pear, plum, and apple trees, together with currant and raspberry bushes, in the latter part of summer or early in autumn.

Thus far, I have been most successful in those earliest transplanted, say from the 20th of August to the last of September, according to the season. The best time is immediately after the usual summer drought, when the summer growth of wood has ripened, I prepare my ground by taking out two spadings of soil, keeping the top spading to mix with the roots, making the hole at least a foot more in diameter than the extent of the roots of the tree. I then drive a single

stake in the position which I intend the tree to stand, not allowing the top of the stake to appear more than four inches above the surface of the ground. If the bottom soil is not rich, on replacing it I mix a good quantity of well rotted compost manure (a few old bones or bone dust will do well here) with it; I fill with this to within four inches of the lower roots, and then use my top soil, laid aside for that purpose, to the roots.

Previous to taking up the tree or bush to be transplanted, I remove every leaf, by cutting them off with sharp scissors; I take up every tree, in the morning of a clear day, and place the roots in a tub of soap suds, saved for the purpose from the last washing day, let them remain there till afternoon, (twenty-four hours will not injure them.) The sun having warmed the ground, I place the tree in its position, with a wisp of straw between it and the stake, and secure it well to the stake with good bass or Russia matting, both below and above the straw; you then have a good tap root in the stake to secure against all winds and frosts, and nothing to chafe either the body or limbs. Now fill up with top soil or earth, in the usual manner, observing to have it well pulverized, to do which there is no difficulty at this season of the year. The soil must be pressed well up under the main roots and about the heel of the tree. All the roots should be spread carefully out, in their natural position, and the earth pressed down over each layer of roots, covering the top roots not more than four inches deep, treading gently round, to press the top soil about them; every broken root should be cut off with a sharp knife. Late in autumn, say November, a little more soil may be thrown over to protect the roots in winter, and removed in spring."

By setting so early, the captain obtained quite a growth of root before winter set in. He mentions that "in several instances, after planting thus early, I have examined the roots in November, and invariably found that they had made new rootlets; in one instance," says he, "having to remove a pear tree on quince stock, in November, after having set it out the first of September, I found that it had made new roots nearly a foot long."

He also recommends that great care be taken not to set the roots too deep, particularly on moist or adhesive soils. Should the drought affect them, on light dry soils, a half peck to a peck, according to the size of the tree, of unleached wood ashes, placed round, from the body of the tree to the distance of four feet, and well watered, will effectually prevent any injury from drought.

Never kill toads, nor drive them from your gardens. They destroy vast numbers of bugs, grubs, cabbage lice, and other pestiferous insects.

The Boston Mass. Horticultural Society, has nearly \$40,000, at interest.

From the Horticulturist.

The whole Secret of growing Quinces.

BY AN OLD ORCHARDIST.

Sir—I will comply with your request to write down for the benefit of your readers my practice in cultivating the *Quince* tree. The commendations you are pleased to bestow on my plantation of this fruit tree, leads me to suppose that I may have struck out a mode better than is generally known or practised.

If so, "it ought," as you say, "to be a secret no longer." Indeed, I have had too many valuable hints from the pages of your journal, not to be willing to add my mite, should it be in my power, to the general stock of information.

I will begin, then, by saying that the great difference, which you have yourself noticed, between the growth and yield of my quince trees, and that of cultivators commonly, is, not that I have discovered a new mode of raising this valuable fruit. It is rather *that I cultivate my trees well, and most persons do not cultivate them at all.*

This sounds like a broad statement. But it is true. I have a neighbor who rides horticulture like a real hobby. His garden and orchard are filled with the hundreds of new pears, and other prodigies of the nurseries. I must do him the justice to say, that he grows these well. He told me last week that he had three hundred and forty sorts of pears in his collection! But, would you believe it? the only Quinces he has, are three trees, half starved, and thrust into an obscure quarter of his grounds, where they have neither been manured nor dug around, I dare say, for years! And thus he sends to me every year for some of my "handsome quinces," under the plea, that his soil does not suit them.

Believe me, the Quince tree is a great sufferer from the common delusion that it is a *bush* that wants a damp and shady place; that it will not grow in a dry soil; and that it does not need any manure.

My theory and practice are based on the very opposites of these three propositions. My plantations, as you saw, are on a high and dry soil, in an open sunny exposure, and in ground kept thoroughly enriched.

I have arrived at this plan of culture by easy stages. Indeed, I have, at the present time, some rows of Quinces, *indifferently planted* in the first place, in soil neither deepened nor duly manured beforehand. Of course, they bear only about half the crop of my later plantation, that has been better treated from the beginning.

The course I have now settled upon, which I may say has been attended with perfect success, is as follows: Premising that the Quince will grow on any soil that will give good corn or potatoes, the first maxim is, that it should be well prepared before planting. This is done by the aid of that great earth regenerator, the subsoil

plough. Two or three weeks, if possible, before the planting season, the land where the quince orchard is to be set, should be broken up by a team of horses and a good plough, set so as to turn a clean furrow. Following this team comes the subsoil plough, drawn by a powerful pair of oxen. This breaks up and stirs the soil twice the usual depth. Most persons spread a coat of manure before plowing. It is my practice to have it scattered along *in the bottom of each furrow*, from a light cart, which follows the subsoil plough. This places it at the bottom of my soil, which, as it is a loamy one, is the best place for it; because it enriches the poorest layer, and being always damp, it is, I conceive, always more soluble, and ready for the roots to take up, than when mixed with the top soil.

The soil, thoroughly plowed and prepared, planting may commence. I prefer the *spring*, but I have often been equally successful in the *autumn*. But in either case, by all means, "take time by the forelock." Not later than the first of November, or the 10th of April, for the latitude of New York—may, I think, be safely given as sound advice.

Dig your holes twice as large as the roots of the trees, and eighteen inches deep. Have, if possible, half a barrel full of good compost, (stable manure and bog earth well mixed for three months previously,) for each tree. Shorten the branches, (one half of the last year's growth,) before you set the trees, and give the roots a good drenching with water before you cover them entirely with soil. Press the earth moderately about the roots, and leave the soil round the stem concave like a saucer, to catch the showers. In this way, if you lose one plant in a hundred, it will be an exception to my usual good luck.

In orchard plantation, I would recommend the Quince tree to be put out in rows: the trees to be ten feet apart, and the rows to be twelve feet apart. This will be near enough in good soil, deep, and prepared as I have just described.—You will be able to gather a good crop of fruit from such a plantation three years after it is made; and if it is well treated, it will continue in a productive state for thirty years. Such quinces as I have grown in this way will always command two cents a piece in the New York market, when those carelessly grown, are not worth half that sum; and I doubt if there is any much more certain and profitable orchard crop than the quince. I ought to observe that for many years open spaces in the ground occupied by the quince orchard, may be cropped with potatoes, sugar beets and the like, with profit and advantage to the trees themselves.

The annual treatment which I give my quince plantations, is, as nearly as possible, as follows: I prune my trees in the autumn, just after the fall of the leaf. This pruning consists in cutting out *as little as possible*, mainly old or decayed wood,

or any branches that make the head too thick or unsightly.

In November, I fork in around the roots of each tree, five or six shovelfuls of fresh stable manure. This dissolves in part by the autumn rains, and fills the soil with soluble matter ready for the first absorption by the young fibres in spring.

When the spring opens, I have the ground ploughed between the rows, and lightly stirred beneath the trees. Directly after this, I give the whole a broadcast spread of salt, at the rate of ten bushels to the acre, or just a light coat sufficient to half conceal the ground under each tree. The cheapest and best salt for this purpose, is the refuse salt of the packing houses, to be had in all large cities where meat is packed for transportation.

I observe that one of your correspondents in Oneida county, has recommended salt for this tree in the last number of your journal. It is a good thing—I may say, the best thing for this fruit. I have used it now for five years, very plentifully, and can say with much confidence, that it is the *sine qua non* for the Quince tree. Deep green foliage, thrifty growth, and large fair fruit, have, with me, invariably followed its judicious application. The Quince and the Plum will bear more of it than any other fruit tree; and provided there is sufficient strength in the soil—that is, provided manure is also given—it may be used every year with decided advantage. I have found by experience, two things: first, that necessary as manure is to the Quince tree, yet common manure without salt will not give the very finest quinces; and second, that a poor soil will not bear heavy doses of salt without injury to vegetation.

Every tree has its insect. The only one worth notice, that infests the Quince, is a little rascal, a sort of *Scolytus*, I believe, that kills the ends of the branches. The egg is deposited about midsummer. The next spring, the little grub which succeeds it, eats through to the pith of the branch, and cuts away the sap-vessels just at the time—midsummer—when they are most wanted. Of course, the shoot above the insect withers and turns black. If this is "let alone," it will spread over your whole plantation. If, on the contrary, you give a little attention to it—say a few minutes every day, from the first day in June, that the dying shoots begin to show themselves, cutting off the limb six inches below where it is blackened, and burning up the trimmings immediately, you will gradually get rid of the whole brood.

If there is anything in this rather prolix account that is worth making public, it is at your service. I am, sir, your obedient servant,

AN OLD ORCHARDIST.

New York, July, 1847.

[Our correspondent's article is one of the most valuable that we have published, and speaks

for itself. For the good results that follow the mode of cultivation which he has detailed, we can vouch most confidently.—Ed.]

From the Prairie Farmer.

Mode of hauling Corn.

I have a practice on my farm that I do not see followed by my neighbors, and which I have found to save a great deal of time and labor.—Having been in the habit of cutting up most of my corn, I have had a great deal of hauling corn to do; but not being engaged so largely as to make it profitable to have one of the low-wheeled wagons on purpose, a friend hinted the building of a rack slung underneath the wheels of my farm wagon. The consequence was the hauling with more ease, with one yoke of cattle, than I used to be able to do with four. The plan was this: Take two stout oak poles, twenty or twenty-two feet long, cut a mortice in the butt-end of each; then take a tough piece, with a tenon on each end, and insert in the mortices for a cross-piece; the width of the rack to be the same as the distance between the hub bands; then take a log chain and fasten in the middle of the cross-piece, and pass it around the king-bolt before the axletree; then draw the rack close up to the axletree and fasten the chain; next run the hind wheels over the other ends of the poles, and, with a pair of trace chains, fasten them close to the axletree; a cross-piece pinned where the hounds come answers in place of a reach; there must also be a temporary reach to keep down the forward hounds, with the addition of a cross piece or two, projecting sufficiently to lay the sides on, and a rail or plank through in the middle makes a rack large enough to haul from four to six shocks of corn at a load with one yoke of cattle.

W. CHALLACOMBE.

Carlinville, April, 1847.

Early Onions.—A correspondent of the Maine Farmer recommends that onions which are wanted for early maturity, should be sown in September. With proper preparation of the soil, and sowing the seed by the 15th or 20th of this month, the plants will usually have time to attain the height of four or five inches before the ground closes, and be ready for an early and vigorous start in the spring. In many parts of Massachusetts, and particularly in the vicinity of Boston, where there is always a ready market for early garden vegetables, the practice of autumnal sowing extensively prevails. He observes: "We have seen large beds of this esculent, and sometimes whole fields sown in this way, and have cultivated them successively in the same manner ourself."—*Farmer and Mechanic.*

In feeding corn to cattle and horses, let it be remembered that seventy pounds of ground corn are equal to one hundred pounds of unground, in nutritious effects upon the animal.

Inoculation--Downing's Method.

Having for several weeks past been engaged in propagating fruit trees by inoculation, or budding, for the sake of speed, I was induced to try Mr. Downing's novel mode, called "American shield-budding," and recommended by him as the best. His directions are, to use the buds without separating them from the slice of wood which necessarily adheres to them.

Now, after having practiced this mode on several hundred young apple trees, of the nursery, and witnessing the result, I feel confident that no one practicing this method can be successful, for at least *one-seventh* of all thus inoculated by me have failed to germinate. And my opinion is, if the work is not performed early, say from the 10th to the last of June, when the buds are young and tender, the operator must experience a much greater loss, as the nearer the wood approaches maturity, the more doubtful the operation must be. After several years' experience in the old plan, of taking the wood out of the buds before inserting them, being careful to leave the eye or root of the bud unhurt, *one-twentieth* was the greatest loss.

Now, why Mr. Downing's quick perception, and close observation, would suffer him, to make choice of, and recommend, such a system of propagation, is astonishing to me; surely he does not desire to mislead those who, in their simplicity, are willing to follow! Although the "Fruit and Fruit-trees of America," is the best work of the kind extant, yet, reason, the philosopher's touchstone, must have been absent, when Mr. Downing was *theorizing* on the subject of budding!—*Western Gard. & Far.* J. H. ROBINSON.

Eberle, Putnam Co., Ia., July, 1847.

From Gaylord's Prize Essay.

The Apple Tree Worm.

There is a most mischievous enemy of the apple, that attacks the fruit only; and where it prevails is known as the apple worm. It is a true caterpillar, not a grub, like the plum and cherry weevils; and is the larvæ of the moth called *Carpocapsa pomonella*, the codling or fruit moth. A good description of this worm, with figures, which are copied above, may be found at p. 230 of Kollar's work on insects. In some years this apple worm has been so common in New-England that a very large part of the apples were rendered worthless by it. It is very rare in the interior of the States, but we have occasionally met with it, and it is to be apprehended it will become still more common. The moth appears in the latter part of June, or beginning of July, and without puncturing the fruit, deposit their eggs in the hollow at the blossom end of the fruit, where the skin is most tender, and the worm the least liable to disturbance. As soon as the worm is hatched, which is in a few days, it commences eating into the young fruit, making

their way from the eye towards the core, and marking its presence by the powder thrown out of the opening. The moth seems to prefer early to the late apples, and the thin-skinned summer fruits suffer the most extensively. In the course of two or three weeks the worm has burrowed to the core, and attained its full size. To get rid of the matters made in its excavations, it cuts a round hole through the side of the apple, and thus is enabled to keep its burrow clear.— Sometimes the worm leaves the apple before it falls, but usually the injury it has received causes it to fall prematurely, when the worm quits it, and spins a cocoon, in which it changes to a chrysalis, and in a few days more the perfect insect appears, to renew the work of destruction. These are only the earliest ones; the later ones do not perfect their transformations till the ensuing spring. The surest mode of destroying the apple worm, is to allow swine to run in the orchard, to gather all the fruit that first falls; or where this cannot be done, to pick them up by hand and feed them to some animal. The plum weevil and the apple worm are distinct insects. The plum weevil has been found in the apple, but the apple worm never in the plum.

Improvement of Horses.

It is a fact well known that the value of horses in this country has been greatly improved by crossings with what is known as the thorough bred horse. The speed and endurance of the animal have been nearly doubled by this means.

While this is true, the fact has been noticed for some years, that in those States where blood horses have been most sought, and the "turf" most fashionable, the stock of horses, for work and road purposes, has rather deteriorated than improved.

A writer in the Albany Cultivator maintains that while the style of breeding, seventy or eighty years since, was calculated to improve the horse for work purposes, that pursued of late is calculated to produce an entirely contrary result. Horses were then trained to run long distances with heavy weights; they are now trained to run short distances with light weights. The results of these opposite modes of training and breeding may readily be seen.

The tendency of the first is to produce a compact, solid, substantial animal, capable of sustaining himself under long continued action. That of the latter is to produce an animal capable of long and rapid strides, continued but a short time. Hence our racers, and all their progeny and relatives, have become a long legged and gaunt generation, poorly fitted for heavy farm work, or exacting road performance.

The inference from this is, that no further improvement is to be looked for from blood horses bred as they are now for the turf; but that animals must be bred for those qualities which fit a horse for road work.—*Prairie Farmer*,

Prices of Breadstuffs in Europe for thirty years past.

Hon. Charles Hudson, of this State, in a speech at the last session of Congress, condensed the following review of the prices of breadstuffs in Europe for the last thirty years :

But our purpose is, at present, more particularly to show from Tooke's history of prices, the state of the crops, and the grain market of England for the last thirty years, the prices stated being in shillings sterling, per quarter of eight bushels each, or 480 lbs.

In 1816 : There was a lamentably deficient harvest, and wheat rose from 55.6 per quarter in February, to 74.11 in June, 82.1 in August, 90.10 in October, 103.7 in December.

In 1817 : There was almost a famine in France, and large purchases were made in England late in the spring, for the French government. The price was 104 in January, and rose to 112.8 in June ; but from the fine weather both in France and England after that time, it fell in July to 102.6, in August to 86.5, and in September to 78.8.

In 1818 : The price was 84.10 in January, 89.8 in April and 86.6 in July, 81.3 in August, and 80.8 in December.

In 1819 : The average price was, in January, 79.3, in June, 68.10, in December, 66.3.

In 1820 : It had risen in August to 72.5 ; but in December it fell to 54.6.

In 1822 : Early in the season the price of wheat was about 50 ; but in December the average price was 38.11.

In January, 1823, the average price was 40.4 ; and rose in June to 62.5 ; and fell again in October to 46.6 ; in December it rose again to 50.8.

In March, 1824, it was 65.6, but declined to 65.4 in December.

In May, 1825, it was 68.9 ; in September, 66.7, in December, 63.

In January, 1826, it was 60.3 ; and fell in March to 55.7 ; and closed in December at 55.8.

In 1827, it was in January, 53.5 ; in July, 59.6 ; in August, 57.11 ; in September, 55 ; in December, 50.2.

In 1828, it was in May, 55.3 ; in June, 54.9 ; in July, 54 ; in November, 73 ; in December, 71.8.

In 1829, much of the crop being of bad quality, sold for 50 ; best quality brought an average of 72.6.

In 1830, in January, it was 54.4 ; in April, 63.11 ; in August, 70.5 ; in October, 60.10 ; in December, 64.11.

In 1831, in February wheat sold for 71.10 ; in August it was 61.11 ; in December, 58.3.

In 1832, it was 61.3 in July ; in December, 52.6.

In 1833, it was 51.1 in January ; and 51.6 in June ; in August, 53.5 ; in December, 47.10.

In 1834 it continued to fall from 45 in the ear-

ly months throughout the year, till, in December, it sold for 39.6.

In 1835, wheat sold in April for 37.10 ; in July, 41 ; but it fell again in December to 35.4 ; being but little more than one-fourth of what it brought at the close of the last century.

In 1836, in January, the price was 36 ; in June, 48.11 ; in October, 46.4 ; in December, 57.9—an advance of seventy per cent. upon the price of December 1835.

In 1837, it fell again, till in May it was 52.10 ; in June, 54.9 ; in August, 57.5 ; in September, 54.11 ; in December, 51.3.

In 1838, in January, 53.5 ; in February, 55.5 ; in March, 56.6 ; in August, 73.8 ; in September it fell to 64.9 ; but it rose again till, towards the last of December, it was 78.4.

In 1839, in January, it reached 81.6 ; in April it fell to 70.1 ; in July and August it was 71.8 ; in December, 66.11.

We have Tooke's prices no later than this year, and therefore have only the price, on the 1st of November, to 1843, as given in Parliament by Lord John Russel, as follows : In 1840, November 1st, 63 ; in 1841, November 1st, 63.2 ; in 1842, November 1st, 50.

In 1843, the price in February was 51 ; in June, 49 ; in August, 62 ; in December, 51.8.

In June, 1844, it was 55.8 ; in August, 40.1.

In 1845, in June, 47.10 ; in August, 57 ; in December, 58.6.

In January, 1846, it was 56.3 ; in March, 54.10 ; in August, 47.5 ; in October, 58.10 ; in November, 62.3 ; in December, 60.3.

In 1847, up to the present time, January 2nd, 64.4 ; January 20th, 73.3 ; February 6th, 73.10 ; February 13th, 71.10 ; February 27th, 74.6 ; March 20th, 75.10 ; March 27th, 77 ; April 10th, 74.—*Massachusetts Ploughman.*

Recipe for Cheap Roofs.

To eight gallons of tar add two gallons of Roman cement, five pounds rosin, and three pounds tallow ; boil and stir well the ingredients, so as to thoroughly incorporate them, and lay on the roof with a brush while hot, spreading it evenly ; then sprinkle it, while hot, with sharp sifted sand, and when cold, tar and sand as before ; after which a single coat of tar once in five or six years will preserve the roof for an age. The roof may be nearly flat ; rafters three inches deep, one inch thick ; the boards half an inch thick ; straightened on the edges and closely nailed ; thoroughly seasoned by the fire, nailed on immediately, and covered with a sheeting of paper, such as in the copee of ships, made fast with small flat headed nails.

Incombustible Roofs.—Lay on a coating of tar as before ; then slake stone lime with hot water in a tub, covering it to keep in the steam ; pass six quarts of it through a sieve, it being fine dry powder, and add to it one quart of fine dry salt, and two gallons of water, boiling and skimming

it. To every five gallons of this mixture add a pound of copperas, and by slow degrees half a pound of potash, and four quarts of fine sharp sand. The mixture will now admit of any coloring matter that may be preferred, and is to be applied with a brush. It looks better than paint, and is as durable as stone. It will stop leaks in the roof, prevent moss growing on and injuring the boards, and when laid on brick work, causes it to become impenetrable to rain or moisture.—*Northwestern Baptist.*

Essay on Hornless Cattle.

It is stated in the books which treat of agriculture, that the quantity of nutriment which goes to the making of a pound of horn is equal to that which would be required for a pound of bone.—The average weight of a pair of horns upon full-grown neat cattle may be set down at about six pounds. It may safely be reckoned that at least thrice the nutriment is expended in order to the formation of bone, which would be taken up in the production of the same weight of flesh. To make a pound of beef, costs on an average, not less than three pence :—every pound of horn, then, costs the grower of the animal, at the lowest computation, nine pence; and a pair of horns take up in the growth the value of six times nine pence, or about one dollar. The horns are only sold with the hide, and the tanner redispenses of them at six pence or a trifle more per pair, so that he doubtless gives nearly a dollar a piece less for his hides than he would be enabled to do if the cattle had none of these expensively-made horns. There is no profit, then, in the sale of horns :—let us see if there is any use in having them upon our catties' heads.

But here the reader, if he be one who would take a wife for the beauty of her ribbons, may exclaim, "How ill a cow looks without horns!" But we must divest ourselves of prejudice, and consider that a cow looks with her eyes, and only hooks with her horns. It may be the man, and not the animal, that does not look right. A sheep does not appear the worse for being without horns; and we are accustomed to seeing sheep both with and without, and can therefore readily and fairly estimate the relative intrinsic beauty of the two sorts.

Is there any necessity or use for the horns upon cattle?—We need not go far out of our own neighborhoods to find cattle that have no horns, of as good qualities in all other respects as those produced and maintained under similar treatment, which wear them. It is found that when two races of cattle are bred together,—the one being with and the other without horns, the progeny takes after each sort in nearly an equal degree, and it has been shown with sufficient evidence, in a prize essay before the Highland Agricultural Society, that the male parent usually gives the preponderance to his own sort. Therefore it is in the power of farmers, by keeping

hornless bulls, to breed cattle without horns if they choose to do so.

As to the use of horns upon cattle, they may, like prickles on gooseberries, serve for defence in a wild condition, yet be clearly objectionable in a state of cultivation :—I never saw a cow make any use of her horns—I mean profitable use—unless to scratch her shoulder; and that she could have done as well by other means.

One plausible argument for horns is that they prevent the cattle from thrusting their heads through brush fences—whereby an opening is easily made for the whole body. But as a brush fence is only a temporary, an imperfect and an improper sort of a boundary, this consideration cannot be seriously entertained against the best of reasons on the other side.

It is thought by some that although horns may be of no use upon cows, yet upon working oxen they are of important benefit, in enabling them to hold back against the yoke in carrying a load down hill. Being myself experienced on this point, I have made many inquiries, and never heard this assertion from one who was in the habit of using such oxen. On the contrary, several persons who have worked oxen of this kind, have informed me that they can hold back their load in going down hill quite as well, if not better, than those which have horns. It appears that when the neck is bowed up close enough for the most advantageous draught, the size of the upper part of the head prevents its drawing through, and the animal will attain an increase of power to hold back the load, by bending his neck outward, in a way that he cannot, if there be a horn to press against the end of the yoke.—It may be, also, that great pressure, and especially occasional concussion, of the yoke against the horn, cause pain in the head of the ox, so that he cannot resist so much as with his stout, thick skinned and gristly neck. I would not maintain positively, however, that horns are of no use in holding back a load. I leave this part of the question still open, and only assert that in all other respects, there appears to be no need nor use for horns upon cattle, or at least upon cows.

The horns are a dead weight, carried at the end of a long lever, the neck, and therefore requiring a very considerable expenditure of muscular energy to sustain them : and accordingly animals bearing horns have stout and coarse necks, making an increase of offal in the carcase—a material objection with the butcher.

We must consider the frequent and great injuries done by hooking. Every one is but too familiar with such cases : cattle hook one another, and the weaker or more quiet, ever in dread of the stronger or more pugnacious animal, abandons its food at the approach of such a one : cattle hook sheep ; the little sufferers are tossed about, to their great injury, and sometimes destruction ; the ewes are frequently made to cast their lambs prematurely, by their owners' choos-

ing to gratify a morbid fancy in cultivating such pernicious, monstrous and frightful appendages: cattle hook colts, especially while weakly in their first winter, and that is the most dangerous time, as the skin and interior membrane are then most tender; and a slight touch from one of these ridiculous and formidable weapons is sufficient to cause a rupture and create a visible deformity, unfitting the animal for market, if not for use:—and last, not least, cattle frequently hook men, women and children.

Cattle with horns are subject to the horn-distemper—a common and troublesome disorder, from which those without horns are certainly exempt.

It is commonly maintained that a handsome pair of horns cause the animal to command a higher price from the butcher, by giving it a larger and more showy appearance. In the first place this is not exactly true; and in the next, if it were, the argument would be no better; for the advantage would be derived only from intrinsic dishonesty, in deceiving the eye of the purchaser. An inexperienced butcher—were such in the habit of buying cattle—might possibly be induced to pay above the value of an animal from such a cause; but the farmers who go to market expecting to cheat the butchers, commonly realize the truth of the proverb, “to go a wool gathering, and come home shorn.”

In parts of England, and other old countries, where people are accustomed to both sorts of cattle, those with and without horns, a cow of the latter kind, of equal quality with one of the former, commands the higher price, on account of her being free from such dangerous appendages. In this country, where limited means prescribes the custom of winter-feeding all the live stock of the farm in one yard, the value of a hornless stock of cattle must be far greater.

As a last resort, some of the advocates of horns allege that hornless cattle do not grow so large, and are not so valuable for use, as others, the cows yielding less milk, and the oxen having less strength. These assertions may be classed with those of a run-away servant: the plea is always “bad victuals” or “bad treatment”—as he must allege something, however false, for an excuse. Let the hornless cattle be equally cultivated, and we may then judge whether they are in any respect inferior to the now more favored breeds.

Horned cattle are called *polled*, perhaps a corruption of *Poland*; they are also called *dodded* by northern Englishmen, and the Irish call them muley, moilly or moillene, probably from a word in their language signifying hornless.

It is a law of nature that, in order to hit a mark, we must aim above it: thus, to gratify our self-love most intensely, we must task our energies with a higher purpose:—would the cattle-breeder, under a sense of duty, seek, so far as his limited means might serve, to establish and cultivate in his animals those qualities which his calm judg-

ment must recognize as most worthy, he would soon find himself rewarded by unlooked-for profit and advantages. Let him aim in this, as in all pursuits, purely to be useful, and, as surely as the harvester reaps of the kind that was sowed, he may according to the immutable laws of nature, expect to receive manifold good for his labors.—*Spirit of the Times.* G. B.

Good Advice to Boys.

Be brisk, energetic and prompt! The world is full of boys—and men too—who drawl through life, and never decide on any thing for themselves—but just draggle one leg after the other, and let things take their own way. Such people are the dull stuff of the earth. They hardly deserve as much credit as the wooden trees; for the trees do *all the good they can*, in merely growing, and bearing leaves and seeds. But these drawling, dragging boys, do *not* turn their capacities to profit, half as far as they might be turned; they are unprofitable, like a rainy day in harvest time. Now the brisk energetic boy will be constantly awake, not merely with his bodily eyes, but with his mind and attention—during the hours of business. After he learns what he has to do, he will take a pride in doing it *punctually and well*—and would feel ashamed to be told, what he ought to do without telling.—The drawling boy loses in five minutes the most important advice; the prompt, wideawake boy never has to be taught twice—but strains hard to make himself up the mark, as far as possible out of his own energies. Third-rate boys are always depending upon others; but *first-rate boys depend upon themselves*, and after a little teaching, just enough to know what is to be done, they ask no further favors of any body. Besides it is a glorious thing for a boy to get this noble way of self-reliance, activity, and energy. Such an one is worth a hundred of the poor dragging creatures, who can hardly wash their own hands without being told, *each time*, how it is to be done. Give me the boy who does his own work promptly, *and well*, without asking—except once for all, at the beginning—any questions; the boy who has wits about him, is never behindhand, and don't let the grass grow under his heels.—*Farmer and Mechanic.*

New Experiment for Hot-beds.—“Doctor Shurtleff, of Spring Grove, recommends, as an economical article, a frame covered with coarse cotton cloth. He says the sun will not scorch the plants under cotton as it will under glass. He gets a soft and pleasant heat fully equal to that under glass, and he thinks it better for lettuce and other plants that are liable to suffer so much from heat, than frames with panes of glass.—The cost is trifling as any gardener may make a box or frame, and the coarsest cotton cloth is best.”—*Massachusetts Ploughman.*

Bound Volumes for Premiums.

The Publishers of the Farmer now offer, for a remittance of one dollar, in addition to two copies of the present Volume, a copy of Volume Four, *substantially bound* in pamphlet form. It may be forwarded by mail at an expense of a few cents for postage.

Interesting Agricultural Facts.

Read before the Farmers' Club and communicated to the Farmer and Mechanic for publication.

BY H. MEIGS, ESQ.

The care of enlightened and patriotic men has caused the introduction of precious plants and animals into countries, which had never, since creation before possessed them.

Lucullus first introduced cherries into Italy, from Pontus, and he first planted them in his princely gardens in Rome, where they have ever since flourished, as greatly as they had done in Pontus.

The *Malus Pyrus*, or rather *Epyrus*, (the pear) from Epirus. The peach (*Malus Punica*) from Carthage. The apricot (*Malus Armeniaca*) from Armenia. The quince (*Malus Cydonia*) from Syria—these after having been naturalized to the climate of Italy, were afterwards transplanted by the Romans, into all the countries conquered by them. The tree from which the first sweet oranges were raised in Portugal, is, perhaps, still living in China, and they bear the name of China oranges, for they were not natives of Portugal.

Rice was first introduced into Carolina about the year 1740.

In England, about the year 1500, there were no muskmelons, sallads, cabbages, turnips, carrots, nor any of those garden roots so important now to the people. Long after that, the cauliflower was introduced, which now grows so finely in England. About the years 1525 to 1550, hops and pippin apples were first introduced; gooseberries, also currants, roses, July flowers, carnations, asparagus, oranges, beans, lettuce, plums, musk roses, tulips, and artichoke. About the year 1769, the rhubarb plant was deemed so naturally confined to Tartary, that the Emperor of Russia regulated the quantity brought to market and the price of it, much in the same way that the Dutch have done cloves and mace, and they made England pay annually nearly a million dollars for it, and it now grows in England to great perfection, and as easily as the common dock.

As to birds, the peacock was introduced into England from the East Indies, the pheasant from Asia Minor, and it flourishes in England.

Our barn yard fowls were brought originally to England from Asia. Our horses are from Barbary, Turkey, Persia, Andalusia of Spain,

and from Arabia, and they flourish among us.—James I. introduced the cattle.

Before the reign of Tiberius it was supposed that the silk worm could exist only in China and Persia. But about the times of Augustus and Tiberius some enterprising man carried the eggs to Greece, where they were found to hatch and thrive perfectly well. They afterwards were carried to Asia Minor, but it was several ages before they were naturalized in Italy by the Franks.

Ayrshire Cow.

We said something a few weeks ago about the *Ayrshire* breed of cows which has been introduced by the State Society, under the most improved form, to which the breed has been carried: for the *Ayrshire* now is a much superior animal to the *Ayrshire* of a dozen or fifteen years ago. It is said by a very competent observer, that the farmers of *Ayrshire* have such a reputation, that it would be difficult to find their superiors in any part of the kingdom of Great Britain: and he terms them "the excellent farmers."—Such is the value of this breed for milk, that some of the large farmers in *Ayrshire* are in the habit, under what is called in Scotland the *boyening* or milk-pail system, of letting the cows to smaller farmers, who pay the owner *ten pounds* (about fifty dollars) *a year*. The owner provides for the cow and incurs all risks. The lessee takes the entire management and care of the cow, and generally gets an ample remuneration, even after paying the ten pounds. This certainly speaks strongly for the character and capacity of the stock.

We have in the county of Hampden a great variety of the *Durham* stock. This is undoubtedly a very valuable race; but we think there is no doubt it must yield to the *Ayrshire*, so far as milk is concerned. It may be stated, however that a cross of the *Durham* with the *Ayrshire* is regarded where the experiment has been made, as an improvement. Colman says, as the result of his observations in Great Britain, that the first cross is invariably a fine milking animal: this point, he says, may be deemed established.—*Springfield Republican*.

Great Yield of Wheat.

Having sometimes seen in the *Cecil Whig*, accounts of extraordinary agricultural productions, I am induced to contribute my mite to the good cause, by forwarding an account of my present wheat crop.

The ground was in oats last season, and almost as soon as it was taken off, the manure was hauled out, stubble broken up, well harrowed, and then left until the 25th of August, when I commenced sowing the *Mediterranean* wheat upon it at the rate of a little more than two bushels to the acre, and ploughing in pretty deep; then ran a large harrow over it, and left it. I think I have

discovered several important advantages from thus early sowing, and ploughing in. In the first place it gives the wheat an early start, and consequently a strong and vigorous root, and it is not near so liable to be thrown out by the winter frost, and as was the case with mine, the first growth was to all appearance destroyed by the fly, but this proved to be no injury to the plant, which having an early start stooled out wonderfully from the root, as will appear from the samples I have sent as the produce of two grains, tied up separately. There are 55 stalks to one, and 54 to the other, and I presume they will yield about 3000 grains of good sound wheat. Yesterday I shelled out the heads of a single grain numbering 52 stalks, and counted them carefully; they numbered 1307 grains. I have the produce of another grain numbering 58 stalks, which I have no doubt will yield 1500 grains of wheat. This may appear almost incredible, and I could hardly believe the evidences of my senses that such could be the result, but I took the several parcels as they were pulled up by the roots in the field, and washed them till there was scarcely a particle of dirt remaining, and then examined them very minutely, and the result was as I have described it; it was only the product of one grain. I have, I believe, without a solitary exception, obtained better crops of wheat by ploughing in, than when I harrowed in.—Wheat sown late, and harrowed in, has but a poor chance against the winter and spring frosts.

PETER ASKEW.

Brick Meeting-house, Md.

Rules for Milking.

Milking cows is generally performed in Maine, wherever I have been, by men or boys. The women, however, do it, or assist in doing it, on some farms; and on most all of them, in busy seasons.

Having milked, more or less, every season since I was a "wee-bit" of a boy, and having seen it done so poorly as to injure the cow, I propose to give a few rules for it, which I have learned from my own and others' experience.—They are as follows:

1. Have a good stool to sit on.
2. Have your finger nails pared short and smooth.
3. Sit down and clean the bag, and wet the teats with the first stream of milk.
4. Then set the pail under, and milk as fast as you can conveniently—the faster the better. A cow will give more milk when milked fast than when milked slow.
5. Milk as though the teats were full to the last, otherwise it makes them long to "strip" in a little while.
6. Never scold or strike a cow for running about the yard or kicking. It generally does more hurt than good.
7. If she runs about, have patience—talk kind-

ly to her—and tie her up, as a last resort, till she is not afraid.

8. If she kicks, sit forward far enough for your knee to come forward of her leg, and she cannot easily hurt you or spill the milk.

9. If she switches you with her tail, in "fly time," fasten it by parting the hair and tying it round her leg. Use a string, if the hair is not long enough.

10. If she holds up her milk, *butt with your hand*. What else does a calf *butt* for but to make the mother give the milk down?—*Maine Far.*

PICKLED BEET.

Augusta, July, 1847.

APPLE TRIFLE.

Stew 6 large apples, sift them, then add sugar, butter and nutmeg as for pies, spread this over the bottom of a large deep dish. Then take a pint of sweet cream and a pint of milk, put in a suitable dish and boil it, when boiling hot have ready beaten the yolks of 6 eggs and a sufficient quantity of sugar to make a sweet custard, stir this into the milk and cook till done. When cold, turn your custard over your apple, and when almost ready for the table, beat the whites of the eggs to a froth and spread over the whole. It makes a fine dessert.

CARROT PIES.

Carrots make good pies, stewed, sifted and prepared exactly like pumpkin. *ELLA.*

APPLE CHARLOTTE.

Cut a sufficient number of thin slices of white bread to cover the bottom and line the sides of a baking-dish, first rubbing it thickly with butter. Put thin slices of apples into the dish in layers till the dish is full, strewing sugar and bits of butter between. In the mean time, soak as many thin slices of bread as will cover the whole, in warm milk; over which place a plate, and a weight to keep the bread close to the apples; let it bake slowly for three hours. For a middling sized dish you should use half a pound of butter for the whole.—*Mrs. Ellis' "Housekeeping made easy."*

Show me the cottage, the roses and the honeysuckles on which are neatly trimmed and trained, and the garden behind is well stocked with culinary herbs and a few choice flowers, and I will speedily find you a cottager who never wastes his time or his money, or debases his mind, and learns the "broad road which leadeth to destruction," in the contamination of an ale-house. If the garden is neat, one may rest assured that the cottage, however humble it is, is the abode of contentment and happiness; and that however simple the fare may be, it is wealth and luxury in full store to the inmates, because they are satisfied with it, and grateful for the possession of it.

Loss of Beef in Cooking.

Beef is the staple animal food of this country, and it is used in various states—fresh, salted, smoked, roasted, and boiled. When intended to be eaten fresh, “the ribs will keep the best, and with care will keep five or six days in summer, and in winter ten days. The middle of the loin is the next best, and the rump the next. The round will not keep long, unless salted. The brisket is the worst, and will not keep longer than three days in summer, and a week in winter.” In cooking, a piece of beef, consisting of four of the largest ribs, and weighing eleven pounds one ounce, was subjected to roasting by Mr. Donovan, and it lost during the process two pounds six ounces, of which ten ounces were fat, and one pound twelve ounces water dissipated by evaporation. On dissection, the bone weighed sixteen ounces, so that the weight of meat fit for the table was only seven pounds eleven ounces, out of eleven pounds one ounce. It appears that when the butchers’ price of ribs is 8½d. per lb., the cost of the meat when duly roasted is 11½d. per lb., and the average loss arising from liquefaction of fat and evaporation of water is 18 per cent. With surloins, at the price of 8½d. per lb. the meat cost when roasted, 1s. 1 1-6d. per lb. at a loss of 20½ per cent. A loss of 18 per cent. was also sustained on boiling salted briskets; and on salted flanks at 6d. per lb. the meat cost 7½d. per lb., at a loss of 13 1-5 per cent. In regard to the power of the stomach to digest beef, that which is eaten boiled with salt only, is digested in two hours and forty-five minutes. Beef, fresh, lean, and rarely roasted, and a beef-steak boiled, take three hours to digest: that fresh and dry-roasted, and boiled, eaten with mustard, is digested in three hours and thirty minutes. Lean fresh beef fried takes four hours to digest, and old hard salted beef boiled does not digest in less than four hours and fifteen minutes. Fresh beef suet boiled takes five hours and thirty minutes to digest.—*Combe.*

Management of Muck, &c.—Muck is the most valuable of any thing the farmer can get as a substitute for barn manure. I have known two or three men haul out a large quantity of raw sour muck on their land, and then, because their crops would not grow on it, put it down that muck was a useless thing, and worse than nothing. All know, or may know, that muck is sour, or acid as they call it. To destroy or correct this acidity, or sourness, is the main thing. My method is this—begin in the fall, when it is dry, and cart out on dry land, and into the barn yard, what I shall need for one or two years. I cover my barn yard from eight to twelve inches deep, all over it, in the fall. In the fore part of next summer I plow it up two or three times. Take a wet time for that. Then, after or in haying, when it is wet, put twenty or thirty bushels of unleached ashes all over the muck, so that they

may leach all through it. In September I haul it where I want to use it in the spring. Then commence again with barn yard as before.

For my hog yard, I haul a load or two once a month. Having it on dry land, I can get it any time. I turn the suds from the wash tub on that—it corrects the acid so that I need no ashes for it.—*Maine Farmer.*

Yours respectfully,

G. CAMPBELL.

Bowdoin, July 31.

A Valuable Table.—The following table compiled from the calculations of J. M. Garnett, Esq., of Virginia, will be found exceedingly valuable to many of our mechanical readers:

A box 24 inches by 16 inches square and 22 inches deep will contain *a barrel*, or 10,952 cubic inches.

A box 24 inches by 16 inches square and 11 inches deep, will contain *half a barrel*, or 5,476 cubic inches.

A box 16 inches by 16.8 inches square and 8 inches deep, will contain *one bushel*, or 2,150.4 cubic inches.

A box 12 inches by 11.2 inches square and 8 inches deep, will contain *half a bushel*, or 1,075 cubic inches.

A box 8 inches by 8.4 inches square and 8 inches deep, will contain *one peck*, or 537.6 cubic inches.

A box 8 inches by 8 inches square and 4.2 inches deep, will contain *one half peck*, or 268.8 cubic inches.

A box 7 inches by 4 inches square and 4.8 inches deep, will contain *a half a gallon*, or 131.4 cubic inches.

A box 4 inches by 4 inches square, and 4.2 inches deep, will contain *one quart*, or 67.2 cubic inches.

The measures come within a small fraction of a cubic inch, of being perfectly accurate, as near indeed as any measures of capacity have ever yet been made for common use.

Vinegar.—Many families purchase their Vinegar, at a very considerable annual expense; some “make do” with a very indifferent article, and others, for want of a little knowledge and less industry, go without. It is an easy matter, however, to be at all times supplied with good vinegar, and that too without much expense.—The juice of one bushel of Sugar beets, worth 25 cents, and which any farmer can raise without cost, will make from five to six gallons of vinegar, equal to the best made of cider or wine. Grate the beets, having first washed them, and express the juice in a cheese press or in many other ways which a little ingenuity can suggest, and put the liquor into an empty barrel,—cover the bung with gauze and set it in the sun, and in twelve or fifteen days it will be fit for use.—*Farmer's Advocate.*

A Mistake.

The last *Prairie Farmer* contains the following:

"Fly in the Head of Sheep."—The Michigan Farmer recommends to inject such substances as spirits turpentine, snuff and tobacco water, up the nostrils of sheep to dislodge the grub. Why not inject it into the sheep's ears? It will certainly do as much good. If any body doubts this, let him cut one sheep's head, at least, in pieces, and see."

Will our neighbor point out when or where we have made any such recommendation as that above mentioned? We think he has got the wrong pig by the ear, and is charging us with somebody's else sin. Knowing that he would not do us wrong intentionally, we have looked over our back numbers to see whether such a thing might not have crept into our columns in spite of our recollection to the contrary; and the only approach to it that we find is in the September Number for 1845, where is contained an extract from a correspondent of the *Prairie Farmer*, (A. Beach) recommending the forcible injection with a syringe of salt water and pepper up the nostrils of sheep, as a perfect cure for worms in the head. In a recent well considered editorial in that paper, it is argued on the contrary, from the form of the passages, that any injection at the nose would be much more likely to go to the lungs than to the cavities of the head where the worms are lodged. We leave the point with the Editors and their correspondent; but would be glad to be informed by those who have tried remedies for this sometimes destructive pest, what has been the result, and whether anything has been found useful.

The Flower Garden.

Most Bulbs in order to do well, should be lifted every year after they have flowered, and before the leaves are entirely decayed. Among these, are Tulips, Hyacinths, Narcissus, Crocus, and Gladiolus communis. After these have been taken up, they should be spread in a dry room and there remain until September or October.—In the mean time, the beds should be well dug, the earth well pulverized, and manured with old, well rotted manure. If the manure comes in contact with the bulbs, it is almost sure death to them, particularly if it is not well rotted. All the above named bulbs should be planted the last of September or first of October. The Tulips, Hyacinths and Narcissus should be planted in rows 18 inches apart and 6 inches in the rows and 3 inches deep. Crocus should be planted at the same time, but nearer together. They are

about the first flowers that make their appearance in the spring, frequently showing themselves above the snow or ice that remains upon the beds. Plant Gladiolus communis at the same time, but in clumps. Crown Imperials, White Lilys, and Jonquil narcissus should not be disturbed oftener than once in two or three years, and then they should be left out of the ground only long enough to prepare the beds.

Peonies, if transplanted in the fall, will flower the next year.

Dahlias, should be cut down to within a foot of the ground immediately after the frost has destroyed the tops. Place a label with the name of the variety upon the part of the stalk that remains. Let the roots remain a few days to ripen, then dig them up, shake off the earth, and lay them away in the cellar. If the cellar is very dry, they will keep better to throw a little sand over them to keep them from drying up.—If the cellar is very wet, place them upon a shelf and examine them occasionally to see that they do not mould or rot.

Grapes are ripening this month. They may be kept fresh for several months, by packing them in a tight box and filling in with cotton wadding in alternate layers.

J. C. H.

Detroit, Sept. 5, 1847.

[The following recipe for destroying cockroaches has been handed us by its inventor, a lady of this city, who has fully tested its efficacy. Its simplicity recommends it in preference to that published in our last number.—Ed.]

A sure Exterminator of Cockroaches.—Two parts red lead, one part brown sugar, one part wheat flour. At night, put a few pieces of paper on the hearth, and sprinkle on a spoonful or two of the mixture; in the morning it can be taken up and put in the dish, and will be ready for the next night. Continue this for a short time, and you will be rid of your troublesome customers. Half a pound of red lead, used in this way, is sufficient to clear the house of any quantity.

From the Boston Cultivator.

Fruit Trees.

Mildew.—If trees be infested with mildew, (having an hoary white appearance,) let the leaves be sprinkled over with weak clean lime water, then be dusted over with flower of sulphur.

Caterpillars.—Strong clear lime water, or strong tobacco water, syringed over the leaves, will destroy them.

Black Insect.—The black insect which attacks the ends of young shoots, may be destroyed by syringing with thick lime water, mud water, or strong tobacco water.

Strong soap suds may be applied in all cases

with certain success, if applied in time, as the glutinous matter which remains prevents the insects from attacking the leaves.

N. B. I have a *watering nose*, made by a tinner at the corner of Richmond and Commercial streets, to be put on the common watering pot, and which is of very little cost, but answers the general purpose of the syringe, and with better effect.

R. DOLBEN.

Cambridge, June 21, 1847.

For those that have no Cellar.

MESSRS. EDITORS:—Two years ago, living in that peculiar state called 'single blessedness,' I had raised a small lot of vegetables, and having no cellar on account of the lowness of the ground, I concluded to devote them to an experiment, which might perhaps benefit somebody else. I had holes dug about two feet deep, and in these I put squashes, pumpkins, beets, turneps, onions, carrots, ruta bagas, and cabbages, heads up and heads down. In laying them down, I avoided as much as I could to bring them in contact with each other, and filled the space between with the excavated soil up to 6 inches from the top, and then I covered the holes with straw up to the level of the ground. During the winter I satisfied myself that the whole vegetables and earth were frozen stiff, and in the spring following it was some time before the whole was thawed out. I then found it in the following condition:

Squashes, rotten.

Pumpkins, do.

Beets, turneps, carrots, rutabagas, in excellent condition, more tender than I ever tasted any before.

Onions had increased 50 per cent. in size, and were juicy and delicious.

Cabbages (with stumps) heads down, almost all rotten.

Cabbages (with stumps) heads up, fresh and good.

This experiment, merely an imitation of nature, shows that in many instances it would be better to preserve at least a part of the vegetables in a similar way than in a poor cellar. A good *dry* cellar is a great convenience, but a poor cellar is not only useless, but it is always a source of disease to those who live above it.—*Prairie Farmer*.

CAUSTIC.

Jefferson, Wis., July, 1847.

How a Farmer out West Preserves his Eggs.

—A gallon pot is filled with eggs; and one pint of lime, of the consistency of common white wash, poured in, and the pot filled with water. A board is then placed on the top, and the water, which is never changed, as well as the eggs, remains pure and sweet. This practice is the one most common in France, the inhabitants of which, to their love of frogs and soup, add also it appears, a very commendable taste for eggs.

The Detroit Horticultural Society holds its final exhibition for the season on Tuesday and Wednesday the 28th and 29th inst. Premiums will be awarded.

Water proof Glue.

An experiment has recently been made by a citizen of Albany, which has resulted in the discovery that a perfectly water-proof and exceedingly adhesive glue may be obtained by immersing common glue in cold water until it becomes perfectly soft, but yet retaining its original form; after which, it is to be dissolved in common raw linseed oil, assisted by a gentle heat, until it becomes entirely taken up by the latter, after which it may be applied to substances for adhesion to each other, in the way common glue is applied. It dries almost immediately, and water will exert no action upon it. It is unnecessary to say for how many valuable purposes in the arts this application may be used. For cabinet makers it is important, as mahogany veneers, when glued by this substance, will never fall off by exposure to the atmosphere. In ship building it will probably answer a valuable purpose, as it has infinitely more tenacity than common glue, and becomes impervious to water.—*Farmer and Mechanic*.

From the Boston Cultivator.

Caterpillars on Gooseberry Bushes.

MESSRS. EDITORS:—To destroy caterpillars on gooseberry bushes, take three gallons of hot soap suds, half a pound of soda, half a pound of salt, and a handful of soot, and mix. Syringe this mixture on a still day, after the sun is off them, and when the mixture has been on about half an hour, dash some clean water over them. Neither the young leaves nor the fruit will be injured in the least by the mixture.

Another Recipe.—Take one large sized fox glove plant, including the root, to every gallon of water; the whole should be boiled in an old copper pan, and then allowed to get cold and clear. The poison of the fox-glove will immediately destroy the caterpillars, and in a great measure prevent their appearance the next year.

R. DOLBEN.

Cambridge, June, 1847.

Manure for Strawberries.—The best top-dressing for strawberry beds is a little leaf mould, pointed in with a fork, early in March. A good addition also is nitrate of soda, three ounces to each square yard, sprinkled over the surface at the same season. Bonedust and charred turf, pointed in with a fork in October, have also been found highly beneficial.

Dodman says, "a very little care and judicious selection of sorts will insure pears *daily* from the end of July till May."

The Loading Rake.

We learn from one of our exchanges that a gentleman in the city of Philadelphia has recently invented, and obtained a patent for a new agricultural implement, which promises to contribute very materially to the abridgement of labor in farming. The machine is called a 'Loading Rake.' It consists of one or two rakes, similar to the common horse rake, attached to the wagon; which, instead of being inverted and leaving their load on the ground, are raised by the onward movement of the team, and deposit their contents in the wagon. By this process, as the hay is taken from the swath, the labor of six or eight men, which is usually required in raking, cocking and loading, is readily performed by two men, and one boy, in three-fourth of the ordinary time.—With the force above stated, three-quarters of an acre can be taken up on a fair average, every half hour. The rake can be adjusted, with some slight alteration, to the ordinary hay wagon, and can be detached at pleasure. The cost will be such as to place it within the reach of every farmer who is accustomed to use the common horse rake. In our large agricultural districts, especially in the new states, where the difficulty of procuring manual labor is so severely felt, it must be regarded in a favorable light, and be, in time, very generally introduced.—*Far. and Mechan.*

New mode of building Rail Fence.—This fence is made with ordinary rails, and has been found to answer when only six rails high. You commence by laying the first tier of rails on blocks about two feet long, these blocks being placed directly crosswise of the rails, the ends of the rails just passing each other, and being laid near the two ends of the block. As you add other tiers of blocks and rails, shorten your blocks, or place the ends of your rails nearer together, until at the top the ends of your rails lie side by side. The rails may be placed, as to distance apart, the same as ordinary post and rail fence. This fence staked and ridged makes a strong fence, and will stand against the wind better than the ordinary rail fence, and the body of the fence, it will be seen, takes up only two feet in width; and that it will take less rails will appear evident to all.—*Farmer's Advocate.*

Useful Recipe for writers.—It is sometimes the case that paper contains oleaginous matter which prevents the ink from spreading, and causes much trouble to those who attempt to write on it. When paper possesses this character, or when it is necessary to write on parchment, which is generally possessed of an oily or greasy surface, put a few drops of fresh, unadulterated beef's gall into the writing fluid, and you will find it to flow easily and freely from the pen. By adding a little salt and vinegar to the fluid, it may be preserved a year or more without corrupting.—*Maine Farmer.*

Topping Corn—Non-mutilation Advocated.

We advise our farmers this year not to top their corn, but to make trial of the plan so long recommended by intelligent practical farmers in almost every section, viz., to cut it up at the roots.—There can be no question but that this wholesale mutilation of the corn operates as a decided injury to the crop. It makes more work, and is practiced in reference to no other production that we know of. It is certainly for the interest of our agricultural friends candidly to investigate this matter, and to ascertain by actual experiment the real difference of expense characterizing the two methods, and the exact difference as to the profits or results.

It appears from the representations of those who have tested, accurately, the value of the two systems, that the loss from cutting, averages about *twenty per cent*, or about one fifth part of the entire crop. In the *New England Farmer*, Vol. X, No. 38, there is an article on this subject, by William Clark, Jr., of Northampton, Mass., to which we respectfully ask the attention of our readers, and from which they may obtain some important hints that they would do well to observe in their treatment of this valuable crop.—*Ib.* W.

Don't Steal that Fruit!—Sure, an' ye don't call it stealing to get over and take a little fruit, do ye? Yes we do, and the meanest kind of stealing, too. You wouldn't walk into that man's house and take his money from his draw, nor his bread from his table, and yet very likely that money and that bread has not cost its owner half so much care, half so much labor, and is not half so much prized and valued as his fruit. Don't steal it. Children and young people are generally the trespassers on this sort of property.—They ought to be carefully cautioned by their parents, by their guardians, by their school-teachers, and by the whole of the older parts of the community, to avoid these species of transgression. Nothing is more aggravating to a person who has for years spent his time and his money in rearing up good fruit of any kind, than to have it filched from him by any body. The theft is contemptibly mean, and yet there are many who look upon it as a very trifling affair, and as one hardly deserving the trouble of a rebuke, when the whole community ought to frown it down.—*Ib.*

To save Horses from Fire.—"I recommend first, to *blind* the animal *thoroughly*, and second, to unloose or cut the halter, and the terrified animal will, with *kind and gentle* usage, at once suffer himself to be led past, nay, even *through* the raging element. I have myself been benefited by possessing the knowledge of this plan, and have satisfactorily and practically put it to the test, after all other means that could be thought of—both *gentle, persuasive, and compulsory*—had been tried in vain."

EDITOR'S NOTE BOOK.

Mt. Airy Agricultural College.—Mr. Gowan, who wished to do his country service by the establishment of an Agricultural College on a liberal plan near his residence in the vicinity of Philadelphia, has been obliged to relinquish his design. The requisite number of pupils, (80) did not offer themselves by the time specified in his circular.

Killing rats.—A correspondent of the Ohio Cultivator recommends a new mode of catching these troublesome intruders. If you have a granary or tight room about the outbuildings, bore a hole in some back corner, where you can have access for closing it without being perceived, then spread a little wheat on the floor, and after one or two nights the *varmints* will all assemble there for a jollification, when they can be easily entrapped by closing the hole. About 11 or 12 o'clock at night is the best time to trap them.—This is good fun for the boys.

Strawberries.—It appears that very jarring reports are given by horticulturists in different sections of the country in respect to the comparative merits of different varieties. In Boston, for instance, Hovey's Seedling and the Boston Pine, which originated there, are pronounced superior to any other variety. In Southern Ohio, these strawberries are pronounced inferior in flavor to most other kinds, and the last, together with some other varieties celebrated at the east, has been set down by the committee of the Cincinnati Horticultural Society as conspicuously worthless. Now this wide variance in judgment cannot reasonably be *all* attributed to local pride. Difference of soil and climate probably change the character of the highly cultivated varieties of this fruit, as it does that of apples, pears, &c.

Peas.—It may not be known to every body that peas, sown as late as the 10th of June, escape the bug, and consequently that for seed, and also for the main crop for kitchen use, late sowing is preferable. There need be no fear about their ripening if sown at this time or even later. We this year sowed in our garden the large Marrowfat on the 15th of June. They began to blossom before the 1st of August, were large enough for green peas between the 20th and 25th, and fit for seed by the 1st of this month. They have a fine growth—vines six feet long. It must be admitted, however, that such late sowing

is liable to the objection of not, in general, giving so good a yield as early sowing, on account of the usual heat and dryness of the latter part of the season.

☞ Judge Caton, of Illinois, has decided to the effect that the insufficiency of fence is no bar to an action for damages done by hogs or other kinds of stock. So says the *Prairie Farmer*.

☞ Money cannot now be sent to publishers by drafts on Postmasters. That regulation has been repealed. Postmasters can frank remittances.

Editorial Change.—Dr. Lee, the late learned and popular editor of the *Genesee Farmer*, has accepted the editorial charge of the *Southern Cultivator*, published at Augusta, Georgia, to which place he is about to remove his residence. The former editor of the *Cultivator*, Jas. Camak, Esq. is deceased. He was one of the ablest of the Agricultural press.

Cut Worms.—May be kept from destroying cabbage plants, etc., by putting a quantity (equal to a large pinch of snuff,) of sulphur around the plant.

Another method which I have adopted with entire success for many years, is, to wrap a large leaf around the plant before setting it, commencing just above the root, and letting it extend some inch and a half above the ground after it is set. We have never lost a plant when thus protected.

The following list of thirty varieties of the apple is recommended by a committee of the N. Y. Agricultural Society as embracing those qualities that constitute a perfect apple.

Early Harvest, Early Strawberry, Large Yellow Bough, Early Joe, and William's Favorite—Summer apples.

Fall Pippin, Golden Sweet, Gravenstein, Jersey Sweeting, Porter, Rambo, Detroit Red, Bellebonne—Autumn apples.

Baldwin, Yellow Bellefleur, Hubbardsons Nonesuch, Jonathan, Newtown Pippin, Northern Spy, Blue Pearmain, Rhode Island Greening, American Golden Russet, Swaar, Ladies' Sweeting, Tallman's Sweeting, Esopus Spitzenberg, Vandevere, Waxen Apple, Westfield Seekno further—For winter use—all American varieties but two.

Fruit and Ornamental Trees.

THE subscribers respectfully solicit the attention of fruit growers and dealers in trees, to their large stock offered for sale the ensuing autumn and next spring, consisting in part of

FORTY THOUSAND APPLE TREES,

Of the most esteemed varieties, from four to eight feet high, at \$12 to \$20 per 100; and \$100 to \$150 per 1000. 5,000 trees of the Northern Spy, (one of the very best long keeping apples known,) five to seven feet high, 37 1/2 cts. each, or \$25 per 100; three to five feet high, 25 cts. each, or \$18 per 100. 1,000 trees of the Early Joe, (a new and delicious summer apple; ripens Aug. and Sept.); strong yearling trees 25 cts. each, or \$2.50 per dozen. A number of select varieties are worked on *Paradise* stocks, adapting them to small gardens. These are one year from bud, of vigorous growth.

TWENTY THOUSAND PEAR TREES,

Of various sizes, from three to seven feet high, embracing upwards of 200 of the best varieties to be found. 6,000 of these are on quince stocks, (mainly one year from the bud, but very vigorous,) just right for training as *Dwarfs*, *Esaliers*, and *Pyramids*. A few hundred trees each of the Swan's Orange or Onondaga and the Belle of Brussels, (two unrivalled large rare fruits,) mostly strong yearlings, at \$1 each.

FIFTEEN THOUSAND CHERRY TREES,

From four to nine feet high, of the finest sorts, 5,000 of them being 2 years old from the bud, with fine heads. Price \$25 to \$40 per 100. A few hundred fine trees can be supplied, budded on the *Cerasus mahaleb*, forming dwarf trees adapted to garden culture.

TWELVE THOUSAND PEACH TREES,

Vigorous and free from all diseases, of 25 best market sorts; at \$12 to \$15 per 100, and \$100 to \$150 per 1,000.

Also, a large stock of all the other hardy fruits, as well as

ORNAMENTAL TREES, SHRUBS, ROSES, &c., &c.,

At low rates by the quantity. The correctness of every article guaranteed.

Orders promptly executed, and trees and plants packed for safe transmission to any part of the United States, Canada or Europe. Priced descriptive catalogues of Nursery and Green House departments sent gratis to post-paid applications.

Orders from the Western states should be forwarded immediately in order that we can ship the trees at the earliest moment they can safely be removed. Packages reach Buffalo in 6 hours from Rochester by Railroad, and are there promptly shipped by our agent, so as to avoid chances of delay.

Address ELLWANGER & BARRY.
Mount Hope Garden and Nurseries, Rochester, N. Y.
September 1, 1847.

Buffalo Nursery and Horticultural Garden.

THIS establishment now contains the largest stock of Fruit Trees, Ornamental Trees, and Shrubbery of size, for sale, ever offered in Western New York, or in the Western country. The stock of fine thrifty Apple Trees is now unusually large and fine. The assortment of choice and select Cherry and Peach Trees, is also very large, embracing a large number of the most valuable and noted varieties. Among his selection of Pear Trees, are some 20 very fine sorts worked on the Quince. Also, a very general assortment of the Plum, Quince, Apricot, Nectarine, Gooseberry, Currant, Raspberry, Strawberry, &c.

The assortment of Ornamental Trees and Shrubs, Flowering Plants, &c., is now extensive, including the most rare and new varieties.

About 200 varieties of the Rose, among them, 30 varieties of the Moss Rose; 33 varieties of Hybrid Perpetual Roses, all hardy and profuse bloomers. 16 varieties of the Peonie.

The descriptive catalogue of this establishment for 1847-8, a pamphlet of 60 pages, giving a full description of several hundred varieties of fruits, &c., will be forwarded to all post-paid applicants.

Trees and Plants packed in superior order; and all orders by mail or otherwise, will receive the same attention as though the person were personally present.

Buffalo, Aug. 15, 1847.

B. HODGE.

ANCIENT AND REAL

Linnaean Botanic Garden and Nursery,

LATE of William Prince, deceased, Flushing, L. I., near New York. The new proprietors of this celebrated Nursery, known as Prince's, exclusively designated by the above title for nearly fifty years, offer for sale every description, including the newest and choicest varieties of Fruit and Ornamental Trees, Shrubs, Vines, Plants, Roses, &c., the genuineness of which may be depended upon; and they will unremittently endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing, and moderation in charges. Descriptive catalogues gratis on application post-paid.
Aug. 4th 47.

WINTER & Co.
Proprietors.

William R. Prince & Co. have not, and never have had, any connection whatever with this ancient nursery, although they have applied its name to their new one.

Detroit Nursery and Garden.

THE subscribers having established a Nursery at Detroit, on the south side of the Chicago road, one mile from the City Hall, are now prepared to fill orders for Fruit and Ornamental Trees, and Shrubbery. We have on hand a choice collection of the most approved varieties of Apple, Pear, Plum, Cherry, Peach, Apricot, Nectarine and Quince Trees. Red and White Currants, Strawberries, Red and White Raspberries, Gooseberries, Grapes, &c. Horse-Chesnut, Mountain Ash, Snow-Ball, Lilac, Althea frutex, Roses, Peonies, and other ornamental trees, Shrubs and Herbaceous plants. We have a large lot of Dwarf Pears, consisting of about twenty of the most choice varieties of early and late Pears; they will come into bearing from one to two years after transplanting. All orders left at the Nursery, or at the store of John Palmer & Co., No. 108 Jefferson Avenue, or addressed to the subscribers at Detroit, will be punctually attended to.

HOLMES & HASTINGS.

Detroit, August 9th, 1847.

Market Intelligence.

DETROIT, Sept. 8, 1847.

FLOUR AND GRAIN.—After the date of our last, flour advanced, and has kept steady at \$4.50 @ \$4.75, the home demand nearly using up the moderate supplies brought in. Yesterday the market was rather on the decline, though \$4.50 may still be quoted.

Wheat at city mills, 20c. Oats, 18 @ 20c. Barley, prime, at brewery 37 1/2c. Rye, 31 1/2 @ 35c. Corn, 35c.

PROVISIONS.—Butter, 10c. Cheese, 6 @ 7c. Eggs, 8 @ 10c. Potatoes, 18 1/2c.

MISCELLANEOUS.—Hides, dry, 3c. green, 6c.; Salt, \$1.44 @ \$1.50, Wood, cord, hard, \$2 @ \$2.25; soft, \$1.50, @ \$1.75.

NEW YORK, Sept. 6.

The flour market was quiet, Genesee from new wheat, \$5.75; Straight Western, \$5.50. Demand moderate.

The last foreign advices tell of favorable weather for harvest in England, and the opposite in some parts of the continent. The potato rot had appeared in several countries, but excited less apprehension than last year, less dependence having been placed upon the crop.

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MICHIGAN FARMER.

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H. HURLBUT, EDITOR.

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ADVERTISEMENTS.—suited to the character of this paper, will be inserted at the rate of 75 cents a folio for the first insertion and 50 cents for each continuance.